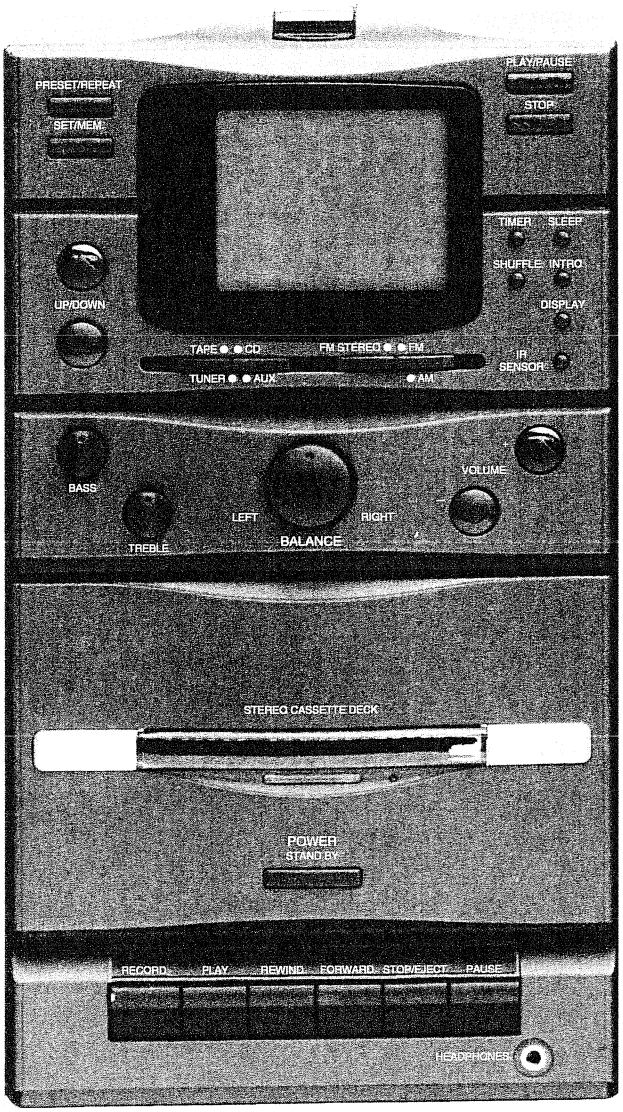
Serviceanweisung
Service manual

ML 10.1
ML 12



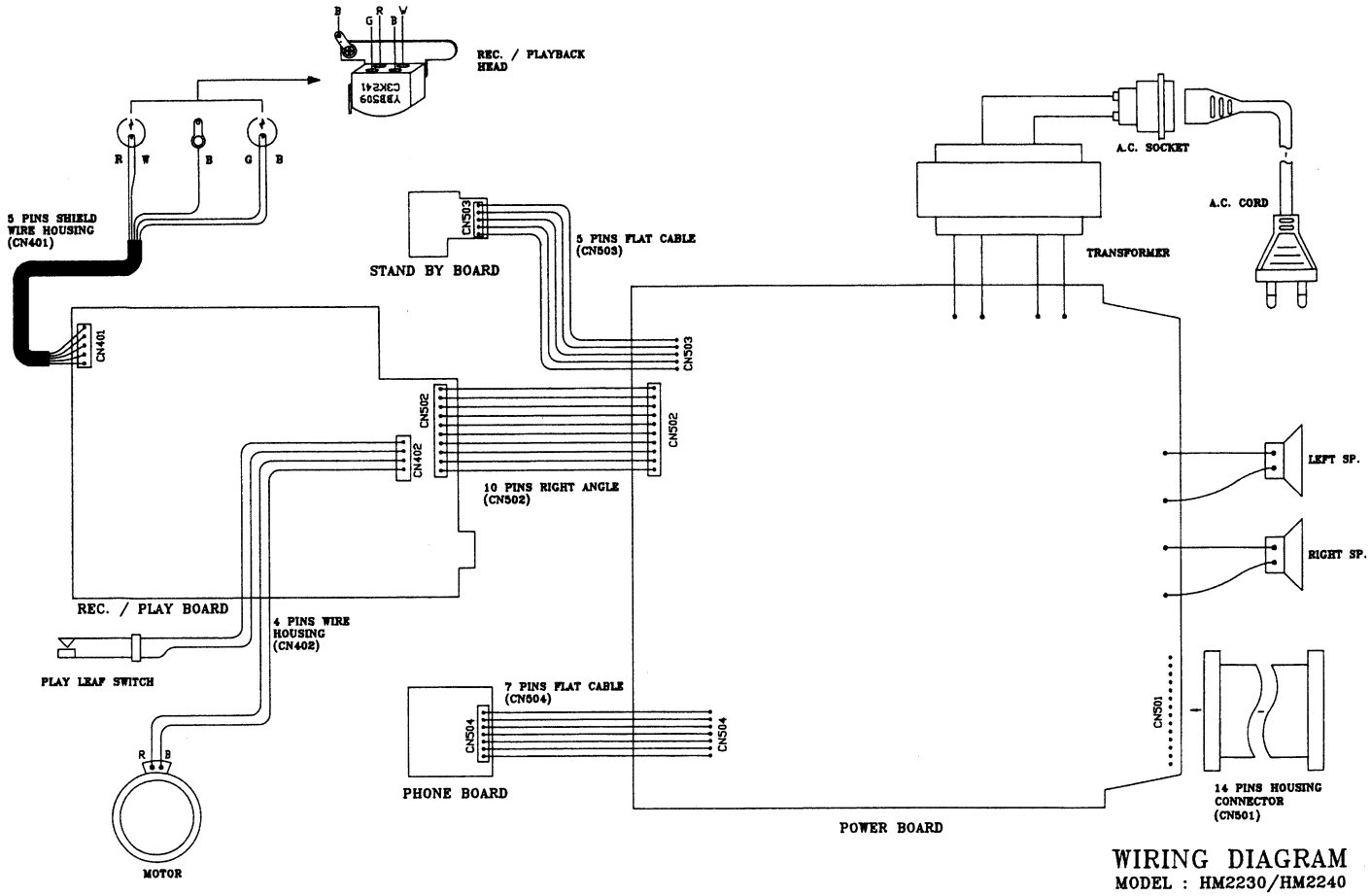
Block 2
(CD/ST)

Block 1
(PA/TD)

Diese Service-Unterlage wurde ausschließlich für autorisiertes Fachpersonal erstellt.
Für Eingriffe durch nicht autorisierte Personen übernimmt der Hersteller keine Haftung.

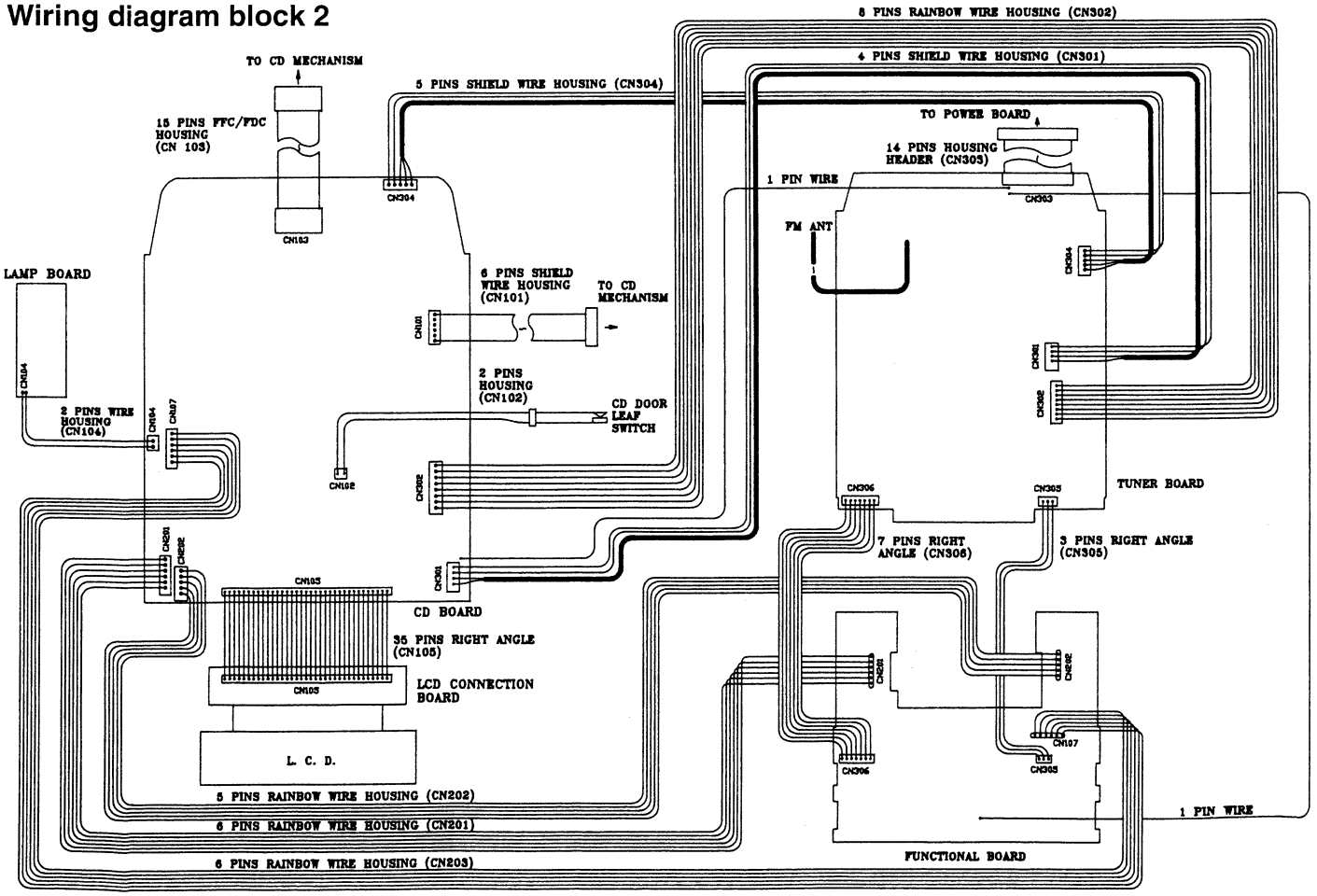
This service manual was made only for authorized specialists.
For interventions by not authorized persons producer doesn't take possession of liability.

Verdrahtungsplan Block 1
Wiring diagram block 1



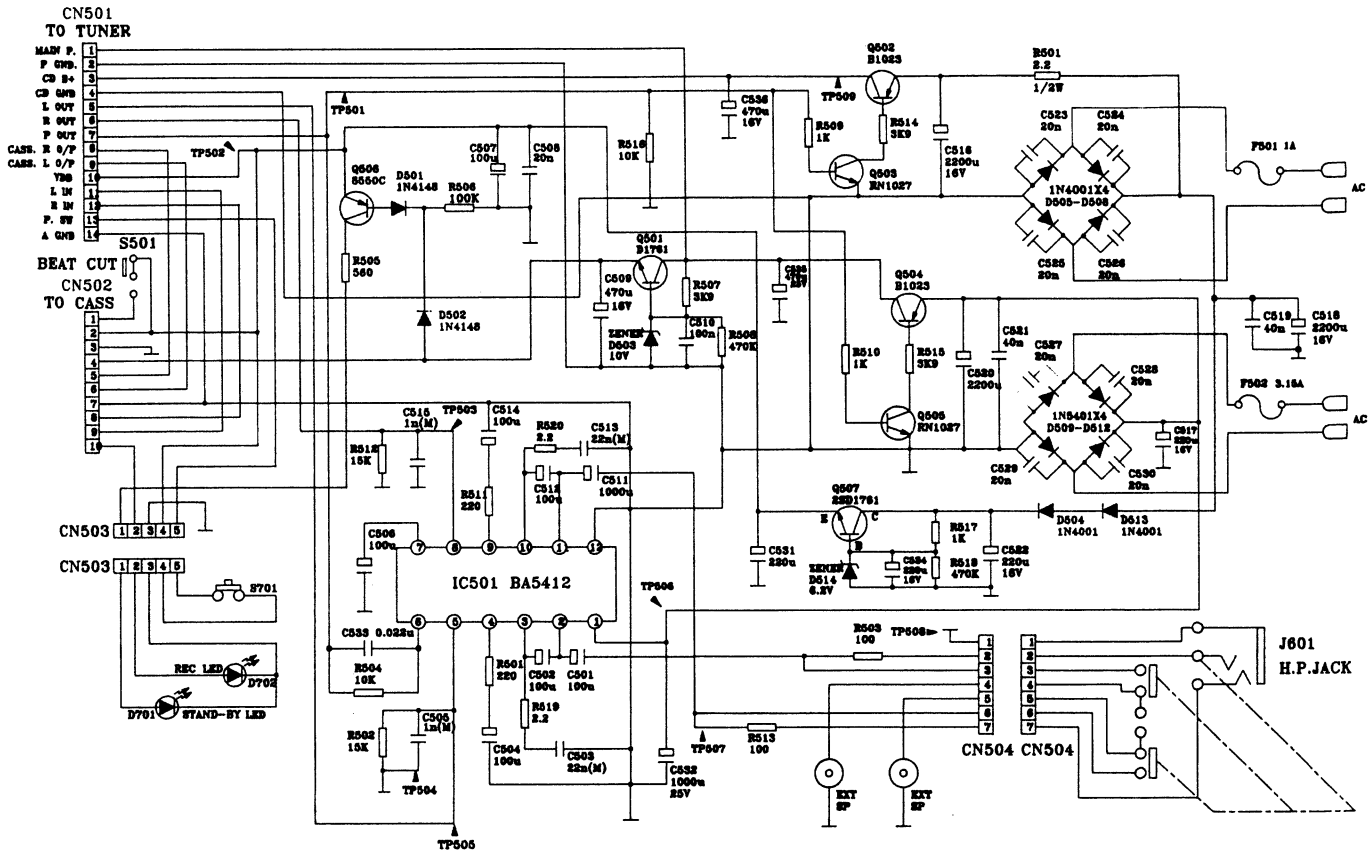
WIRING DIAGRAM
MODEL : HM2230/HM2240
BLOCK: 1

Verdrahtungsplan Block 2
Wiring diagram block 2


8 PINS RAINBOW WIRE HOUSING (CN302)
4 PINS SHIELD WIRE HOUSING (CN301)
TO CD MECHANISM
5 PINS SHIELD WIRE HOUSING (CN304)
15 PINS FFC/FDC HOUSING (CN 103)
TO POWER BOARD
14 PINS HOUSING HEADER (CN303)
1 PIN WIRE
FM ANT
LAMP BOARD
6 PINS SHIELD WIRE HOUSING (CN101)
TO CD MECHANISM
2 PINS HOUSING (CN102)
CD DOOR LEAF SWITCH
2 PINS WIRE HOUSING (CN104)
TUNER BOARD
7 PINS RIGHT ANGLE (CN306)
3 PINS RIGHT ANGLE (CN305)
CD BOARD
36 PINS RIGHT ANGLE (CN105)
LCD CONNECTION BOARD
L. C. D.
5 PINS RAINBOW WIRE HOUSING (CN202)
6 PINS RAINBOW WIRE HOUSING (CN201)
6 PINS RAINBOW WIRE HOUSING (CN203)
1 PIN WIRE
FUNCTIONAL BOARD

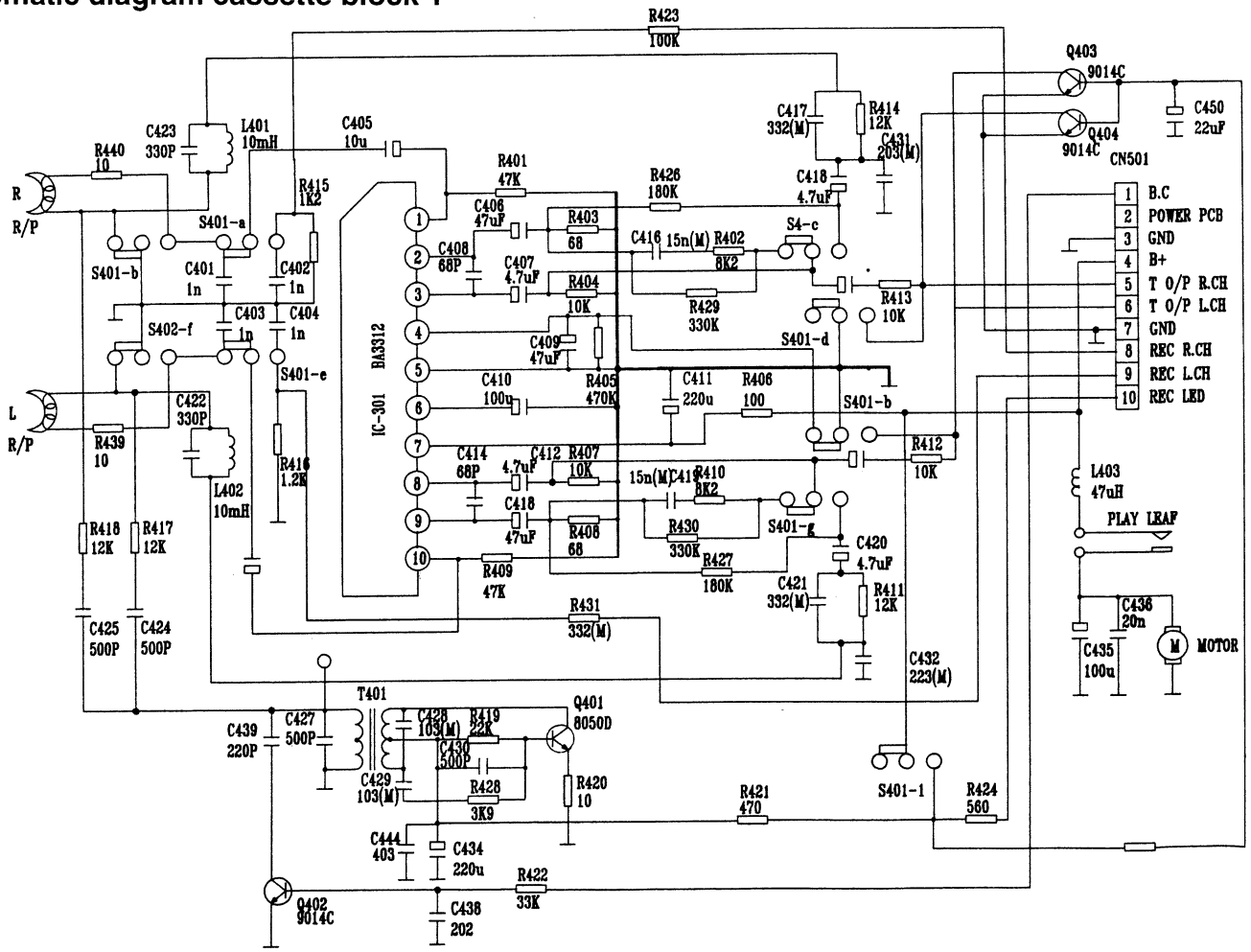
Schaltbild Netzteil Block 1

Schematic diagram power block 1



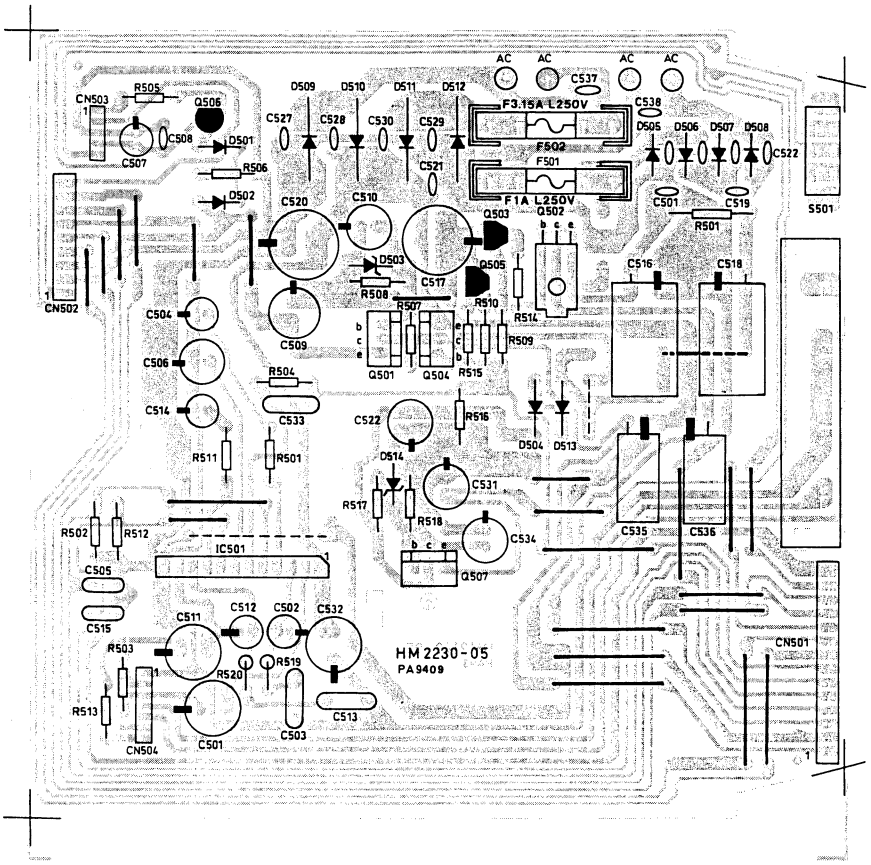
Schaltbild Recorder Block 1

Schematic diagram cassette block 1

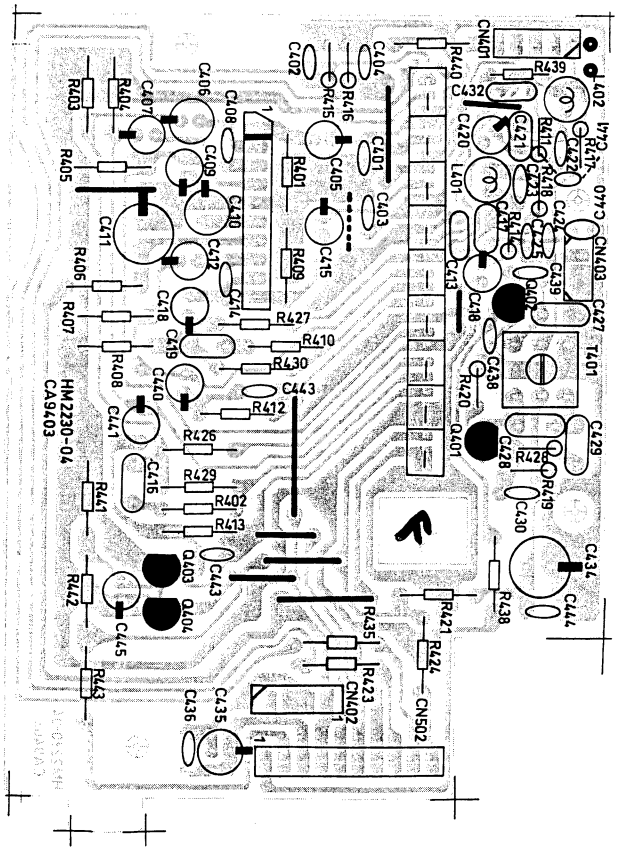


Platinendarstellung Block 1
P.C.B. diagrams block 1

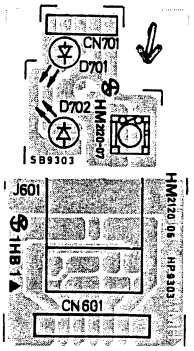
Netzteilplatine
Power board



Platine Recorder
Cassette board



LED-Platine
LED-board



Ersatzteilliste elektrisch Block 1
Spare parts list electrical block 1

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 595 68	Platine Recorder	Cassette board assy		C 4
00 595 69	Netzteilplatine	Power board assy		E 4
00 602 74	IC BA 3312 N	IC BA 3312 N	IC 301	B 1
00 657 60	IC BA 5412	IC BA 5412	IC 501	B 4
00 582 16	Transistor 8050 C	Transistor 8050 C	Q 401	A 1
00 606 94	Transistor 9014 C	Transistor 9014 C	Q 402-404	A 1
00 595 70	Transistor 2 SD 1761	Transistor 2 SD 1761	Q 501,507	A 4
00 460 74	Transistor 2 SA 1020 (2 SB 892)	Transistor 2 SA 1020	Q 502,504	B 2
00 576 99	Transistor DTC 114 YS	Transistor DTC 114 YS	Q 503,505	A 0
00 581 89	Transistor 8550 C	Transistor 8550 C	Q 506	A 1
00 112 41	Diode 1 N 4148	Diode 1 N 4148	D 501,502	A 0
00 061 31	Zenerdiode 10 V	Zenerdiode 10 V	D 503	A 2
00 034 03	Diode 1 N 4001	Diode 1 N 4001	D 504-508	A 7
00 570 80	Diode 1 N 5401	Diode 1 N 5401	D 509-512	A 1
00 034 03	Diode 1 N 4001	Diode 1 N 4001	D 513	A 7
00 406 79	Zenerdiode 6,2 V	Zenerdiode 6.2 V	D 514	A 1
00 582 18	LED SLV 31 MT3F - Function	LED SLV 31 MT3F - Function	D 701	A 4
00 244 81	LED rot - Rec	LED rot - Rec	D 702	A 3
00 595 71	Löschspule Bias 2A623 (braun)	BIAS IFT 2A621 brown	T 401	A 2
00 485 30	Widerstand 2,2 Ohm/0,5 Watt	Resistor 2.2 Ohm/0.5 Watt	R 501	A 1
00 582 20	Schiebeschalter A/W	Push switch (9P2T)	S 401	A 9
00 582 19	Schiebeschalter Beat cut	Slide switch SK-22F05G7	S 501	A 3
00 580 59	Taster EVQ-PAE-04B	Tact switch	S 701	A 3
00 582 21	Klemmanschlüsse LS 4-fach	Speaker socket	EXT SP	A 7
00 580 63	Klinkenbuchse 3,5 mm Headphone	Headphone jack	J 601	A 7
00 582 22	Netzanschlussbuchse MKJ-102	AC power socket	AC	A 6
00 595 72	Netztrafo EI-57 SV5711-TV3A	Power transformer	230 V	B 9
00 596 04	Netztrafo EI-57 SB5711-TVA	Power transformer UK	240 V/UK	B 9
00 016 43	IEC Sicherung T1 A/250 V	Fuse IEC T1 A/250 V	F 501	A 2
00 060 64	IEC Sicherung T3,15 A/250 V	Fuse IEC T3,15 A/250 V	F 502	A 2

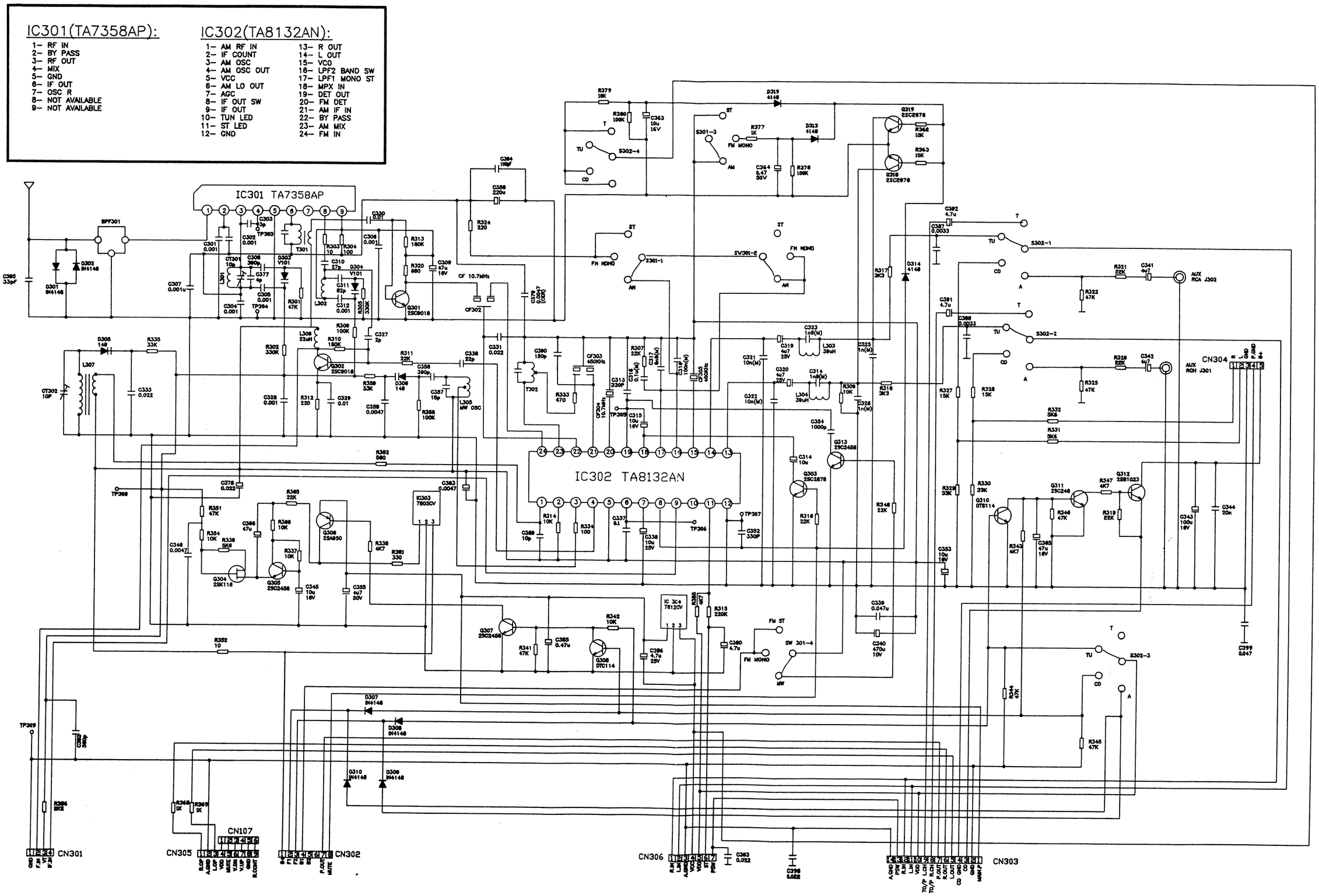
Ersatzteilliste elektrisch Block 2
Spare parts list electrical block 2

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 595 85	Grundplatine Tuner	Tuner board assy		E 6
00 595 86	Grundplatine CD	CD board assy		F 8
00 595 87	Bedienteilplatine	Control board assy		D 6
00 595 88	IC TA 8191 F	IC TA 8191 F	IC 101	B 6
00 595 89	IC TC 9236 AF	IC TC 9236 AF	IC 102	D 0
00 595 90	IC BA 6298 FP	IC BA 6298 FP	IC 103	B 7
00 587 58	IC TDA 1311 A	IC TDA 1311 A	IC 104	B 3
00 600 42	IC BA 15218 N	IC BA 15218 N	IC 105	A 6
00 595 91	IC TC 9309-113	IC TC 9309-113	IC 106	C 7
00 268 06	IC TC 9153 AP	IC TC 9153 AP	IC 201	C 3
00 378 30	IC TA 7358 AP	IC TA 7358 AP	IC 301	A 9

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 666 62	IC TA 8132 AN	IC TA 8132 AN	IC 302	B 9
00 595 92	IC 7805 CV	IC 7805 CV	IC 303	A 2
00 510 98	IC 7812 CV	IC 7812 CV	IC 304	A 5
00 570 08	IR Empfänger RPM-638 CBR-L	Remote receiver	RM 201	B 4
00 129 59	Transistor 2 SA 1015 Y	Transistor 2 SA 1015 Y	Q 101,103	A 6
00 595 93	Transistor 2 SA 1048 GR	Transistor 2 SA 1048 GR	Q 102	A 4
00 667 72	Transistor DTC 143 TS	Transistor DTC 143 TS	Q 105,106	A 2
00 595 93	Transistor 2 SA 1048 GR	Transistor 2 SA 1048 GR	Q 108,109	A 4
00 580 45	Transistor 2 SK 118 R	Transistor 2 SK 118 R	Q 110,304	A 3
00 249 62	Transistor 2 SC 2458 (2 SC 1815)	Transistor 2 SC 2458	Q 111-202	A 3
12 710 72	Transistor 2 SC 2878 B	Transistor 2 SC 2878 B	Q 203,204	A 1
00 249 62	Transistor 2 SC 2458 (2 SC 1815)	Transistor 2 SC 2458	Q 205,206	A 3
00 595 93	Transistor 2 SA 1048 GR	Transistor 2 SA 1048 GR	Q 207	A 4
00 082 52	Transistor 2 SC 1923 R	Transistor 2 SC 1923 R	Q 301,302	A 5
12 710 72	Transistor 2 SC 2878 B	Transistor 2 SC 2878 B	Q 303	A 1
00 249 62	Transistor 2 SC 2458 (2 SC 1815)	Transistor 2 SC 2458	Q 304,307	A 3
00 595 94	Transistor 2 SA 950 O	Transistor 2 SA 950 O	Q 306	A 3
00 327 62	Transistor DTC 114 ES	Transistor DTC 114 ES	Q 308,310	A 6
00 249 62	Transistor 2 SC 2458 (2 SC 1815)	Transistor 2 SC 2458	Q 311,313	A 3
00 595 95	Transistor 2 SB 1023	Transistor 2 SB 1023	Q 312	A 4
12 710 72	Transistor 2 SC 2878 B	Transistor 2 SC 2878 B	Q 318,319	A 1
00 112 41	Diode 1 N 4148	Diode 1 N 4148	D 101-302	A 0
00 652 41	Diode 1 SV 101	Diode 1 SV 101	D 303,304	B 5
00 595 96	Diode 1 SC 149	Diode 1 SC 149	D 305,306	A 3
00 112 41	Diode 1 N 4148	Diode 1 N 4148	D 307-319	A 0
00 604 84	Keramikschwingkreis CSA 8,46 MHz	Cer. resonator CSA 8.46 MI	X 101	B 1
00 570 86	Quarz 7,2 MHz	Crystal 7.2 MHz	X 102	A 6
00 595 97	Bandpassfilter 88-108 MHz	BPF 88-108 MHz	BPF 301	A 3
00 609 41	Keramikfilter SFE 10,7 MA 5L	Cer. filter SFE 10.7 MA 5L	CF 302	A 4
00 580 53	Filter Keramik SFU 450 B14	AM ceramic filter SFU 450 B14	CF 303	A 7
00 652 44	Keramikfilter CDA 10,7 MG18	Ceramic filter CDA 10.7 MG18	CF 304	A 4
00 652 45	Keramikfilter CSB 456 F18	Ceramic filter CSB 456 F18	CF 305	A 4
00 595 98	FM Übertrager 94006 (orange)	FM IFT 94006 orange	T 301	A 2
00 595 99	MW Übertrager 7ZA-93056 (gelb)	MW IFT 7ZA-93056 yellow	T 302	A 2
00 596 00	AM Oszillatorspule 780-93115	AM OSC coil 780-93115	L 305	A 7
00 485 30	Widerstand 2,2 Ohm/0,5 Watt	Resistor 2.2 Ohm/0.5 Watt	R 199	A 1
00 241 52	Widerstand 18 Ohm/0,5 Watt	Resistor 18 Ohm/0.5 Watt		A 3
00 663 13	Trimmpoti 100 kOhm	SFR 100 kOhm	VR 101	A 3
00 581 90	Drehwiderstand 100 KBx2/Bass, Treble	Rotary 100 KBx2/Bass, Treble	VR 201,2	A 6
00 581 91	Drehwiderstand 100 KB/Balance	Rotary 100 KB/Balance	VR 203	A 9
00 580 05	Mikroschalter LSA-1119 M	Leaf switch LSA-1119 M	OP/CL	A 5
00 580 59	Taster EVQ-PAE-04B	Tact switch	S 201-213	A 3
00 581 92	Schiebeschalter 3-fach Band	Slide switch, Band	SW 301	A 5
00 581 93	Schiebeschalter 4-fach Function	Slide switch, Function	SW 302	A 5
00 580 61	Chinch-Anschlussbuchse schwarz	RCA jack RJ-1003-30B	RCA 301	A 5
00 580 61	Chinch-Anschlussbuchse schwarz	RCA jack RJ-1003-30B	RCA 302	A 5
00 596 01	LCD Display TOA-4065 CD, Tuner	LCD display CD, tuner	LCD	C 3
00 596 02	Lampe 5 V/100 mA - axial	Lamp 5 V/100 mA	PL 101,2	A 7

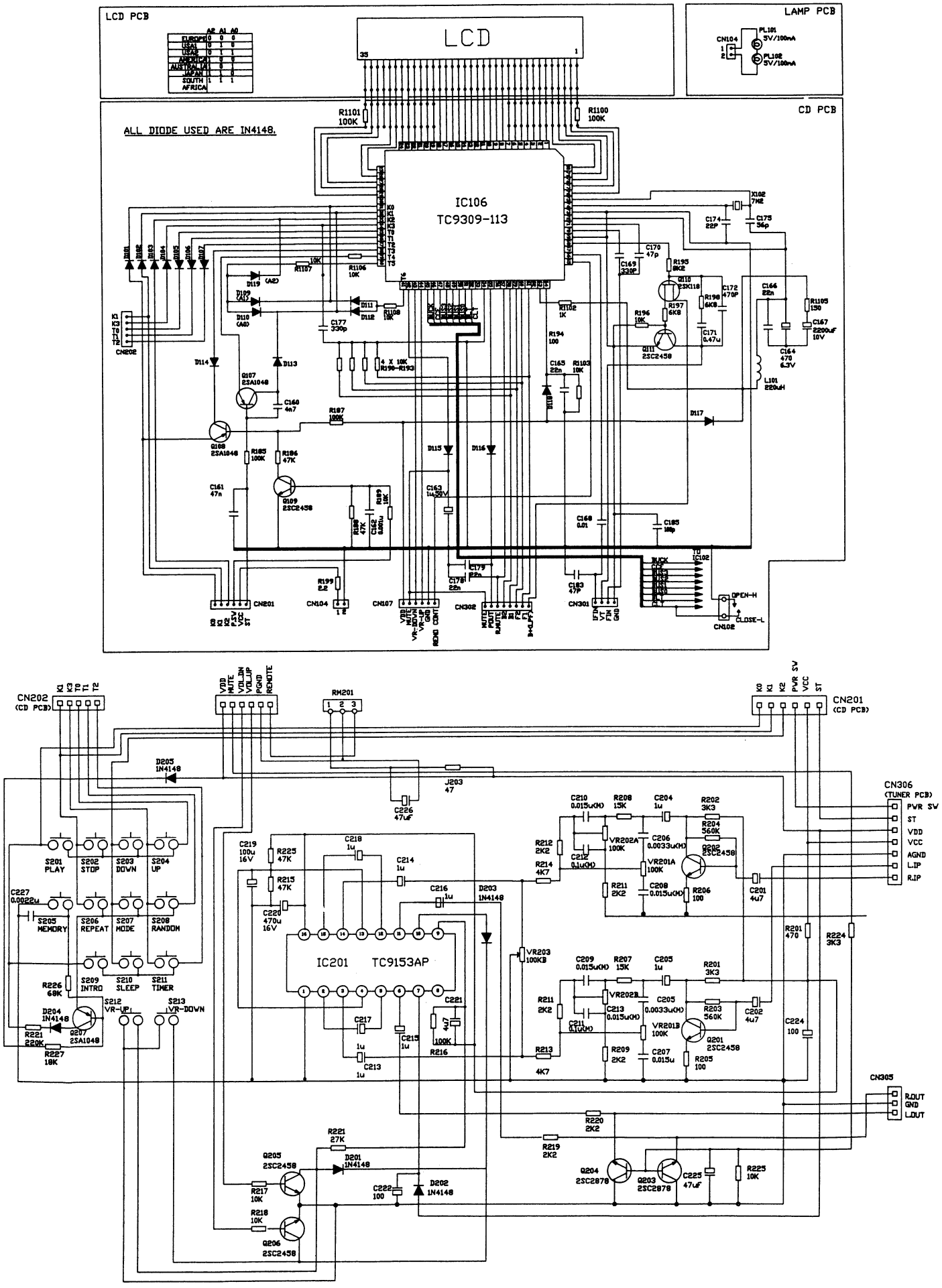
Schaltbild Tuner Block 2

Schematic diagram tuner block 2



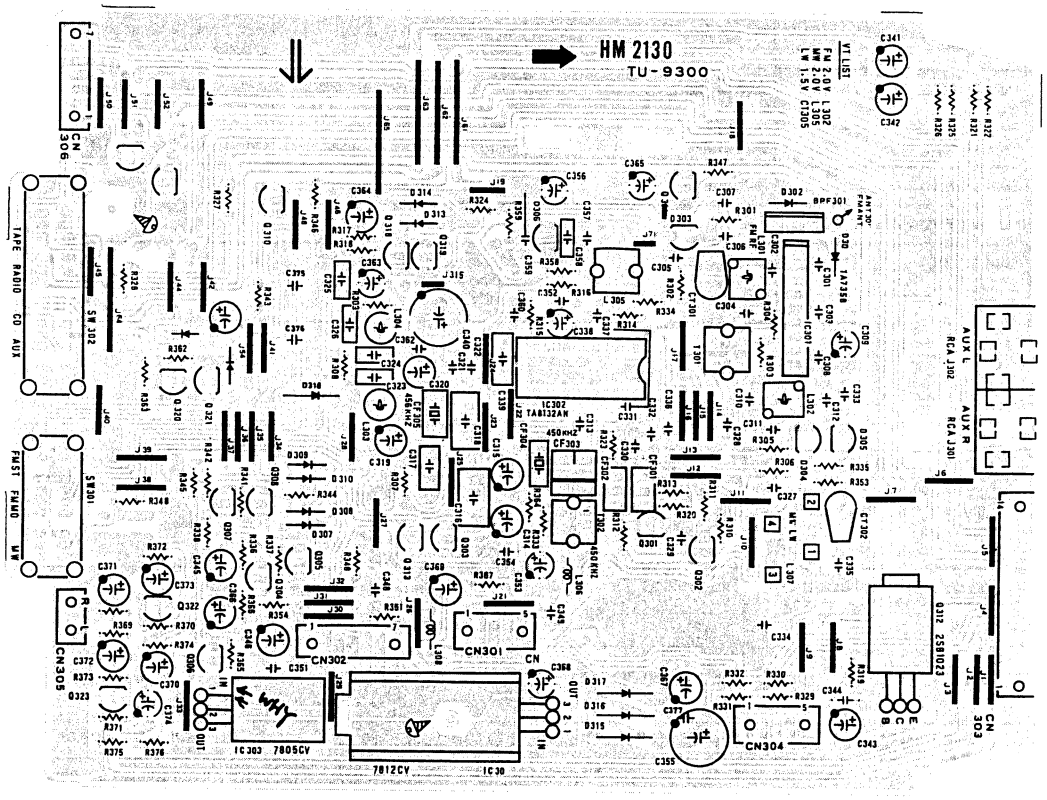
Schaltbilder Bedienteilplatine Block 2

Schematic diagram control board block 2

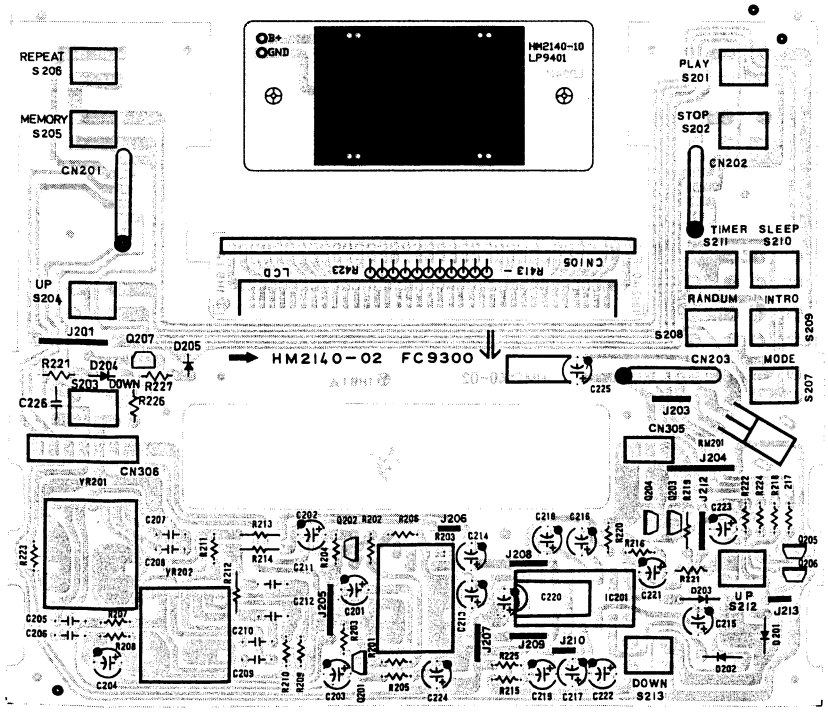


Platinendarstellungen Block 2
P.C.B. diagrams block 2

Grundplatine Tuner
Tuner board



Bedienteilplatine
Control board



Abgleichanweisung Tuner Block 2
Alignment procedure tuner block 2

FM SECTION

STEP	ALIGNMENT	TEST EQUIPMENT	SIGNAL IN	SIGNAL OUT	ADJUSTMENT	REMARK
1	IF 10.7MHz	(1) FM IF sweep generator (2) Alignment oscilloscope	Inject the IF signal through 150Pf capacitor to TP303, TP304 GND	Take out signal from TP305, TP307 GND	Adjust 301 to get the best 'S' curve with center at 10.7MHz. (See Fig. 2)	Band switch in FM position
2	87.5MHz	(1) FM RF sweep generator (2) Alignment oscilloscope	Inject the RF signal directly to TP301, TP304 GND	Same as Step1	Adjust L302 to get VT voltage 1.8VDC at 87.5MHz.	Press preset UP key to low end 87.5MHz
3	108MHz	Same as Step 2	Same as Step 2	Same as Step 1	Check VT voltage 7~8V at 108MHz.	Press preset UP key to get high end 108MHz
4	90.1MHz	Same as Step 2	Same as Step 2	Same as Step 1	Adjust L301 to get max. output.	Press preset UP key to get 90.1MHz
5	106.1MHz	Same as Step 2	Same as Step 2	Same as Step 1	Adjust TC301 to get max. output.	Press preset UP key to get 106.1MHz
6	REPEAT STEP 4, 5 AND THEN 2, 3, 4, 5 UNTIL NO FURTHER IMPROVEMENT CAN BE MADE					
7	98.1MHz	Same as Step 2	Same as Step 2	Same as Step 1	Make sure output is at 98.1MHz, tracking error must be within specifications.	Press preset UP key to get 98.1MHz

FM STEREO SECTION

STEP	ALIGNMENT	TEST EQUIPMENT	SIGNAL IN	SIGNAL OUT	ADJUSTMENT	REMARKS
1	98.1MHz Stereo sensitivity	(1) FM STEREO signal generator (2) Oscilloscope (3) AC Voltmeter	Inject the RF stereo left channel signal directly to TP301, TP304 GND with 18dB input	Take out the signal from TP501 and TP502, TP503 GND with 4 OHM load	"STEREO" must appear in the display	(1) Selector switch in STEREO position (2) FM STEREO deviation 67.5KHz pilot 10%
2	98.1MHz right channel separation	Same as Step 1	Inject the left channel input signal with 60dB	Same as Step 1	The right channel output in min reading on AC voltmeter - the separation should be within the specifications	(1) Set EQ. control to flat position (2) Set volume control to make L-CH to REF. output
3	98.1 left channel separation	Same as Step 1	Inject the right channel input with 60dB	Same as Step 1	The left channel output in min reading on AC voltmeter - the separation should be within the specifications	(1) Set EQ. control to flat position (2) Set volume control to make R-CH to REF. output
4	REPEAT STEPS 1, 2 & 3 UNTIL BOTH CHANNELS ARE OF APPROXIMATELY EQUAL READINGS AND NO FURTHER IMPROVEMENT CAN BE MADE AND RECORD THIS READING AS CHANNEL SEPARATION					
5	98.1MHz Stereo LCD Sensitivity	SAME AS STEP 1 DECREASE THE INPUT SIGNAL FROM THE GENERATOR UNTIL THE STEREO LED IS OFF THEN INCREASE THE INPUT SIGNAL GRADUALLY UNTIL THE STEREO LCD COMES ON. RECORD THIS READING AS STEREO LCD ON SENSITIVITY.				

MW SECTION

STEP	ALIGNMENT	TEST EQUIPMENT	SIGNAL IN	SIGNAL OUT	ADJUSTMENT	REMARK
1	IF 450KHz	(1) MW IF Sweep gen. connected with Loop antenna (2) Alignment oscilloscope	Put the MW antenna coil L307 close to the Loop antenna	Take out signal from TP306, TP307 GND	Adjust T302 until the best signal peak is obtained. (See Figure 1)	Move band switch to MW position
2	522KHz	(1) MW RF Sweep gen. with Loop antenna (2) Alignment oscilloscope	Put the MW antenna coil close to the antenna of the MW IF Sweep generator	Same as Step1	Adjust L305 to get VT voltage 1.62VDC at 522KHz	Press preset UP key to get low end 522KHz
3	1620KHz	Same as Step 2	Same as Step 2	Same as Step 1	Check VT voltage 10~12.5V at 1620KHz	Press prest UP key to get high end 1620KHz
4	612KHz	Same as Step 2	Same as Step 2	Same as Step 1	Adjust MW antenna coil L307 to get max. output	Press preset UP key to get 612KHz
5	1404KHz	Same as Step 2	Same as Step 2	Same as Step 1	Adjust TC302 tp get max. output	Press preset UP key to get 1404KHz
6	REPEAT STEPS 4 & 5 AND THEN 2, 3, 4, 5 UNTIL NO FURTHER IMPROVEMENT CAN BE MADE					
7	999KHz	Same as Step 2	Same as Step 2	Same as Step 1	Make sure the output is at 999KHz, tracking error must be within specifications	Press preset UP key to get 999KHz

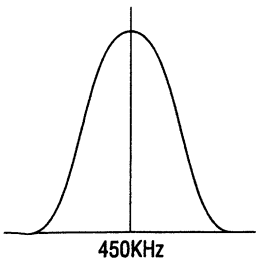


Figure 1

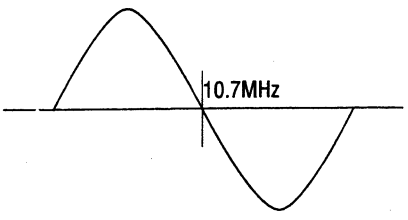
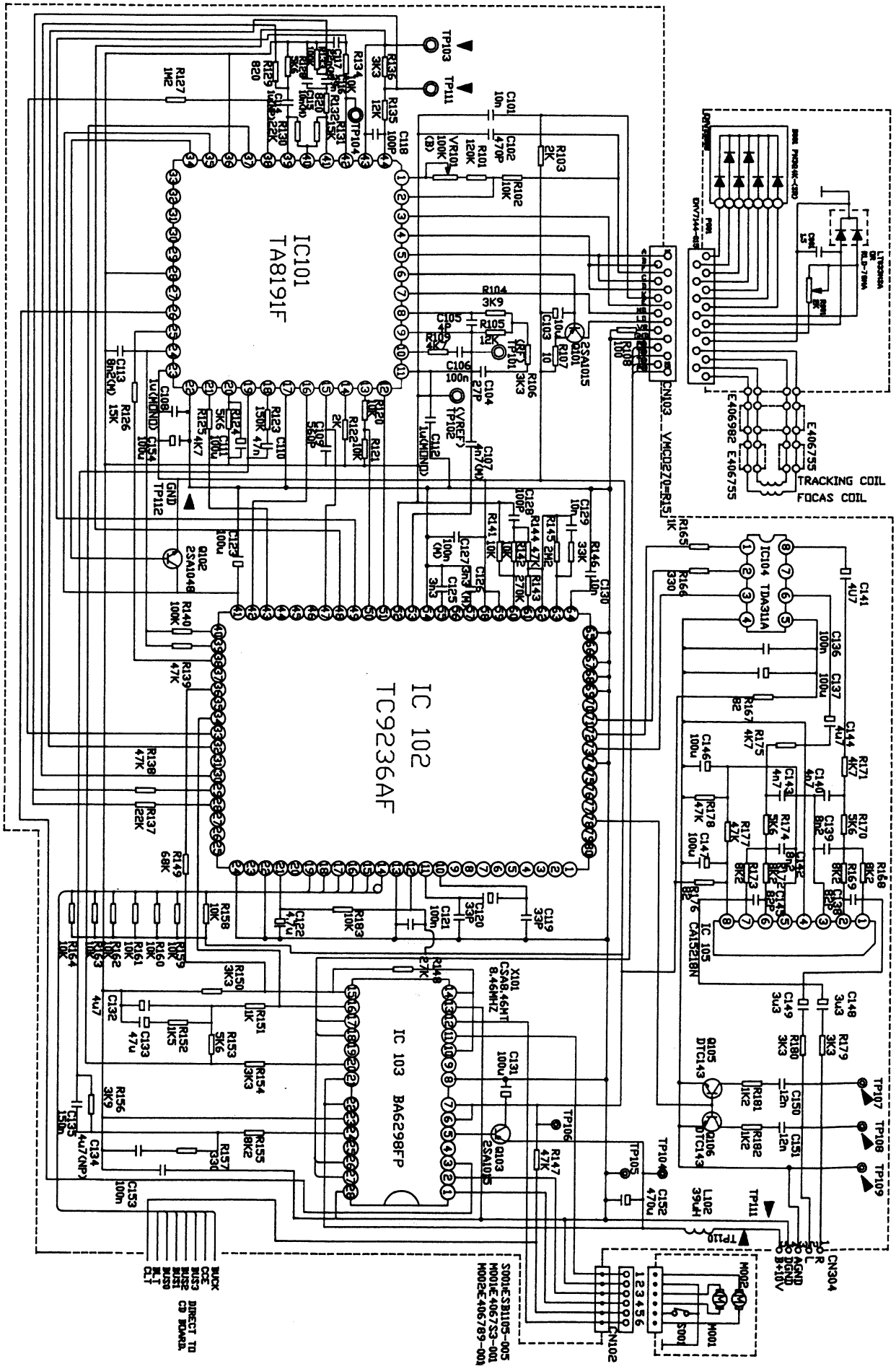


Figure 2

Schaltbild CD Block 2

Schematic diagram CD block 2



Abgleichanweisung CD Block 2
Alignment procedure CD block 2

PUNKT	TESTGERÄT	ANSCHLUSS	ABGLEICH	HINWEIS
Abgleich Tracking Balance	Oszilloskop	Oszilloskop an TP 103 und TP 112 GND anschließen (siehe Figur 4)	VR 101 so abgleichen, daß Wellenform wie in Figur 5 aussieht (A=B)	(1) »PLAY«-Taste bei eingelegter CD-Platte drücken (2) »UP« und »DOWN« betätigen um das Bild laut Fig. 5 zu erhalten
ITEM	**TEST EQUIPMENT**	**CONNECTION**	**ALIGNMENT**	**REMARK**
Tracking balance adjustment	Oscilloscope	Connect the oscilloscope to TP 103 and TP 112 GND. (See Figure 4)	Adjust VR 101 to get the waveform shown as A=B. (See Figure 5)	(1) Press the "PLAY" key with CD already loaded. (2) Press the "UP" and "DOWN" keys to obtain tracking signal in oscilloscope as shown. (See Fig. 5)

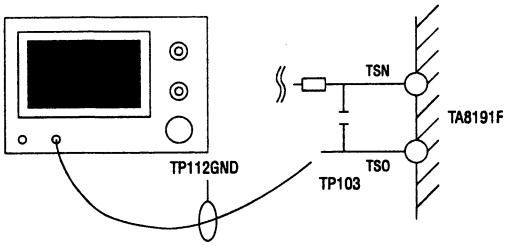


Figure 4

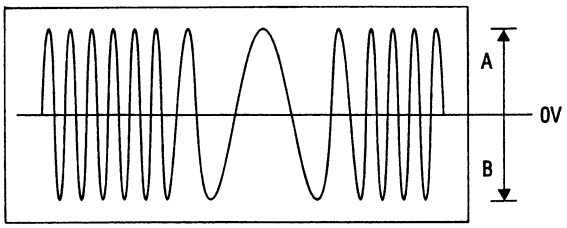
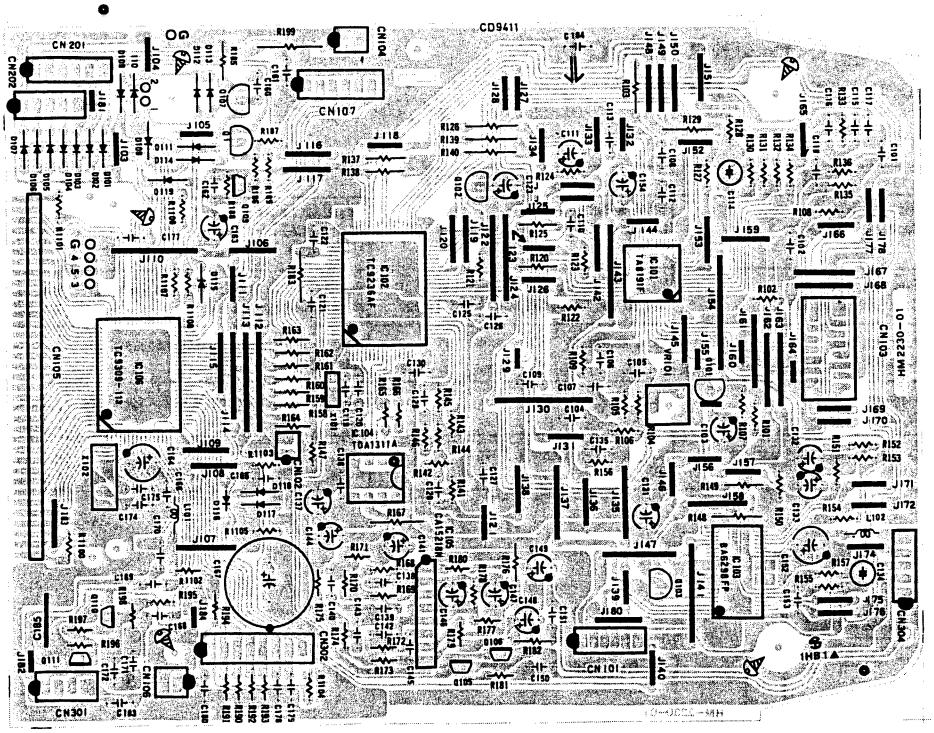


Figure 5

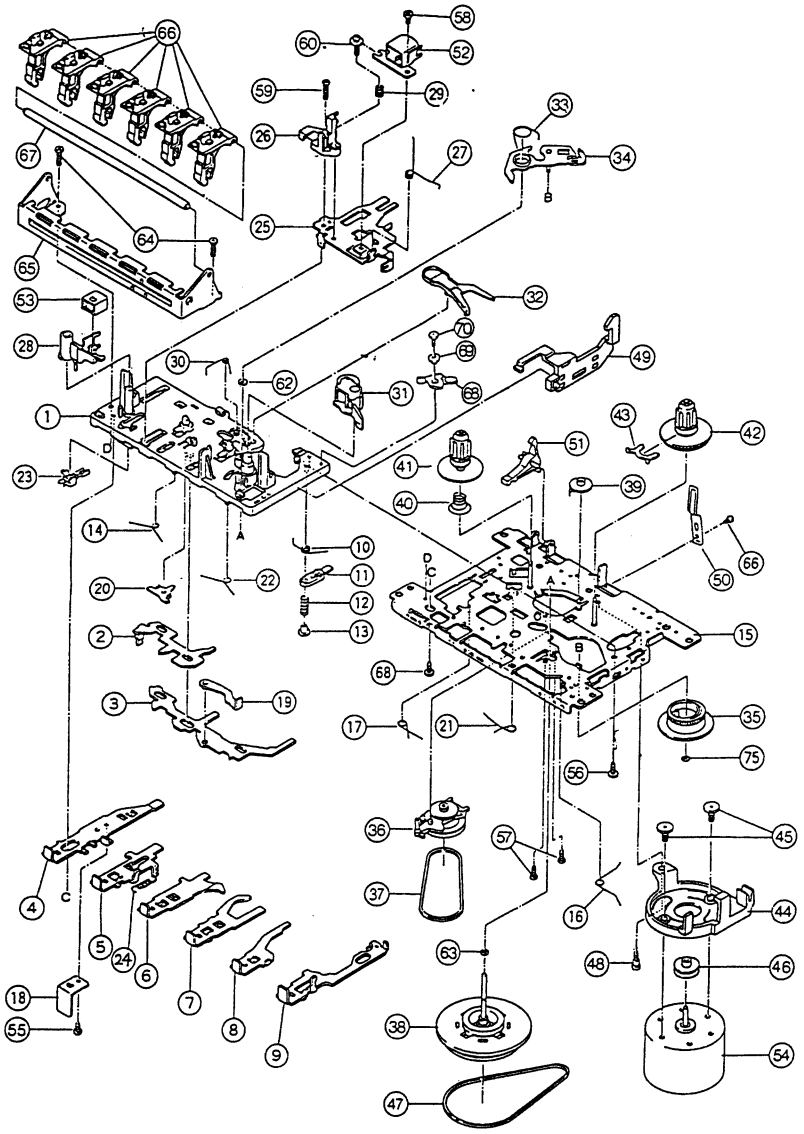
TP 101 (RF): HF-Signal mit Test-CD Philips 5A 1,3 Vss, mit Sony Yeds 18 1,2 Vss
TP 101 (RF): RF signal with test CD Philips 5A 1.3 Vpp, with Sony Yeds 18 1.2 Vpp

Platinendarstellung Block 2
P.C.B. diagram block 2

Grundplatine CD
CD board



Explosionsdarstellung Cassettenmechanik Block 1
Exploded view cassette mechanism block 1

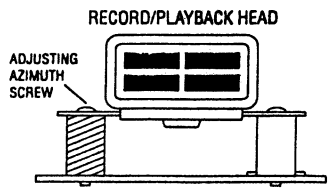


Abgleichanweisung Cassette Block 1
Alignment procedure cassette block 1

CASSETTE UNIT

STEP	ITEM	CONDITION	CONNECTION	ALIGNMENT	REMARK
1	Speed adjustment and sens. check	Playback Test Tape MTT-111 3KHz	WOW & Flutter meter - Connect to TP501 or TP502, TP 503 GND	Adjust VR motor until reading at 3KHz +3%/-2% WOW/Flutter should be within specifications.	(1) For 3KHz (2) Variation fo output should not be more than 2dB per channel.
2	Head adjustment	Playback Test Tape MTT-113N 6.3KHz	VTVM and Oscilloscope - connect to TP501 and TP502, TP503 GND with 4 OHM load.	Adjust PB Head azimuth screw to get max output. (See Figure 3)	Max. output variation should not ne more than 3dB in each channel.
3	Frequency response	Playback Test Tape MTT-217,MTT-257C(125,1K,8K)	Same as Step 2.	Make sure the frequency response is within specifications.	1KHz = 0dB
4	Separation check	Playback Test Tape MTT-141	Same as Step 2.	Make sure the separation is within specifications.	Set volume control to make R-CH or L-CH to ref. output.
5	Recrding AC Bias adjustment	Set unit to Recording position	FQ. Counter - connect to TP401 and TP402 GND.	Adjust OSC Transformer (T401) to get OSC frequency - should be within 75KHz-80KHz.	Beatcut switch (S501) switching at position 1 to get 80KHz for reference frequency.

Figure 3:



Vormagnetisierung: FE – 25 Vss
DC magnetization: FE – 25 Vpp

Ersatzteilliste Cassettenmechanik Block 1
Spare parts list cassette mechanism block 1

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 582 12	Cassettenmechanik TN21ZSC-1140	Deck mecha. TN21ZSC-1140		D 5
00 468 63	Feder Pauserasthebel	P control spring	CM 10	A 3
00 464 17	Pauserasthebel	Pause lever (E)	CM 11	A 5
00 441 30	Druckfeder Pauserasthebel	Pause lever spring	CM 12	A 3
00 441 31	Sicherungsstöpsel Pause	Pause stopper	CM 13	A 2
00 324 28	Feder Tastenhebel (Vor-, Rücklauf)	Button lever spring (A)	CM 14	A 3
12 916 47	Feder Betätigungshebel	E actuator spring	CM 16	A 1
12 916 48	Feder Rasthebel	P.S. lever spring	CM 17	A 1
00 468 64	Feder Aufnahmetaste	Rec. button lever spring	CM 21	A 3
00 324 23	Feder Tastenhebel (Stop, Pause)	Button lever spring (B)	CM 22	A 3
00 667 09	Mikroschalter MSW-1541 T	Leaf switch MSW-1541 T	CM 23	B 1
00 324 25	Feder Starthebel	Play button lever spring	CM 24	A 3
00 457 60	Feder Kopfträgerplatte	Panel P spring	CM 27	A 4
00 324 35	Feder A/W-Kopf	Azimuth spring	CM 29	A 3
00 482 03	Feder Bandandruckrolle	M control spring	CM 30	A 4
00 571 68	Bandandruckrolle kpl.	Pinch roller arm ass'y	CM 31	B 1
00 441 35	Tasthebel Endabschaltung	Sensing lever	CM 32	A 6
00 660 85	Feder	Gear plate spring	CM 33	A 3
00 441 36	Kurvenzahnrad	Cam gear	CM 35	B 2
00 441 38	Riemen Rutschkupplung	RF belt	CM 37	B 3
00 468 65	Schwungmasse kpl.	Flywheel ass'y	CM 38	B 8
00 441 40	Zahnrad Vorlauf	FF gear	CM 39	A 7
00 443 19	Feder Wickelteller links	Back tension spring	CM 40	A 3
00 441 41	Wickelteller links	Supply reel ass'y	CM 41	B 0
00 603 29	Wickelteller rechts	Take up reel ass'y	CM 42	B 1
00 464 36	Spange Wickelteller	Sensor	CM 43	A 3
00 441 43	Antriebsriemen	Main belt	CM 47	A 3
00 464 18	Gleithebel Eject	Eject slide lever	CM 49	A 8
00 324 51	Aufnahmesperrhebel	Record safety lever	CM 51	A 5
00 580 70	A/W Kopf BS 09x1	P/R head BS 09x1	CM 52	A 9
00 580 72	Löschkopf 6 PAx1	Erase head 6 PAx1	CM 53	A 7
00 582 13	Antriebsmotor EG530 AD-9BX1	Motor EG530 AD-9BX1	CM 54	B 4
00 324 62	Sicherungsscheibe Schwungmasse	P washer	CM 63	A 0
00 653 20	Tastenhebel	Button frame (S)	CM 65	A 2
00 653 21	Tastenrahmen mit Achse	Operation lever	CM 66	A 7

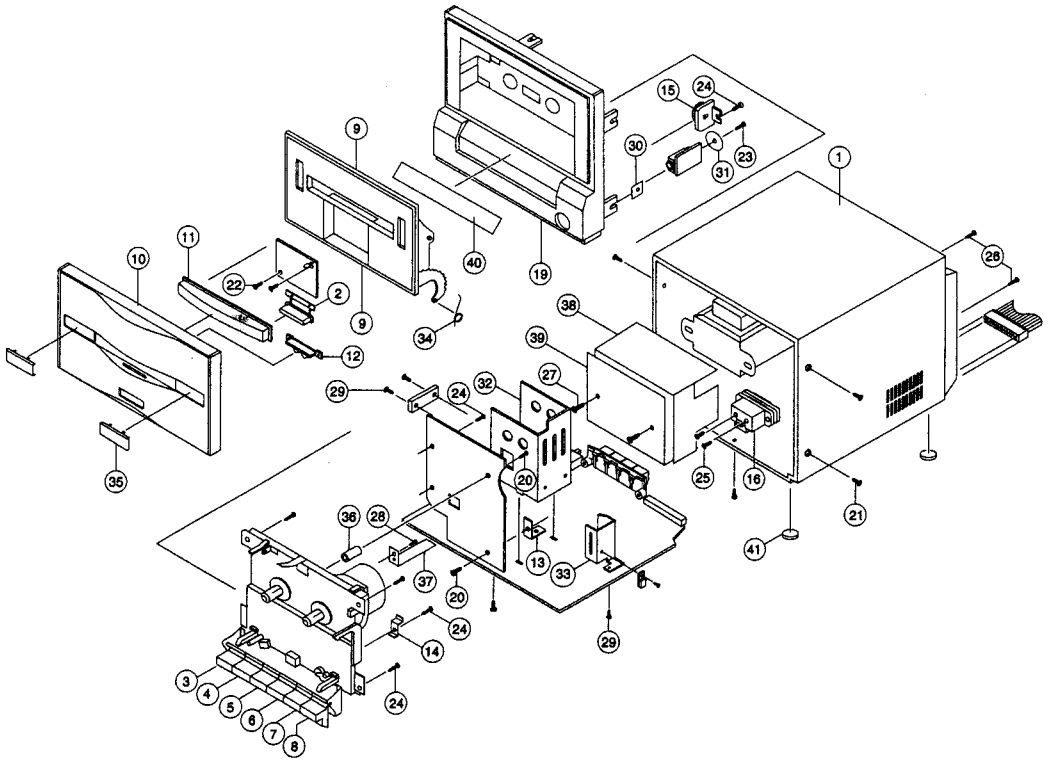
Achtung: Für die Cassettenmechanik sind nur die oben genannten Ersatzteile lieferbar.

Attention: For the cassette mechanism are only the above mentioned spare parts available.

Ersatzteilliste Gehäuse Block 1
Spare parts list housing block 1

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 665 41	Fernbedienungsgeber RC 107	Remote control RC 107	Beipack	D 0
00 589 95	Fernbedienungsgeber RC 107 Dual	Remote control RC 107 Dual	Beipack	D 0
00 582 11	Verbindungskabel Block 1- Block 2	14 pin flat cable housing assy	Beipack	B 0
00 311 44	Netzkabel Kleingeräte	AC power cord	Beipack	B 5
00 582 26	Netzkabel Kleingeräte UK	AC power cord UK	Beipack	C 4
00 416 50	Micro Batterie 1,5 V	Battery "AAA" 1.5 V	2x	A 1
00 722 60	ML 10.1 LS	Speaker box ML 10.1		D 3
00 722 92	Dual ML 10.1 LS	Speaker box Dual ML 10.1		D 3
00 722 70	Dual ML 12 LS	Speaker box Dual ML 12		D 3
00 589 97	Frontblende PA/TD	Front panel PA/TD	19	A 6
00 581 98	Gehäuse PA/TD	Rear cabinet PA/TD	1	B 7
00 581 68	Gummi Fuss	Rubber foot	41	A 1
00 581 99	Cassettenfach	Cassette door	9	A 7
00 589 96	Cassettenfachdeckel ML 10.1	Cassette door cover ML 10.1	10	A 4
00 596 03	Cassettenfachdeckel ML 12	Cassette door cover ML 12	10	A 4
00 582 01	Blende Cassettenfach	Cassette door lens	11	A 4
00 581 73	Dämpfung Cassettenfach	Gear damper	15	A 5
00 596 07	Feder CD Fachdeckel	Eject spring	34	A 1
00 583 89	Abdeckung Cassettenfach Metall	Cassette door metal cap	35	A 3
00 582 02	Blende Stand-by LED	LED lens	12	A 2
00 582 03	Knopf Stand-by	Button Stand-by	2	A 2
00 582 04	Klaviertaste Record	Cassette knob record	3	A 3
00 582 05	Klaviertaste Play	Cassette knob play	4	A 3
00 582 06	Klaviertaste Rewind	Cassette knob rewind	6	A 3
00 582 07	Klaviertaste Forward	Cassette knob forward	5	A 3
00 582 08	Klaviertaste Stop/Eject	Cassette knob stop/eject	7	A 3
00 582 09	Klaviertaste Pause	Cassette knob pause	8	A 3

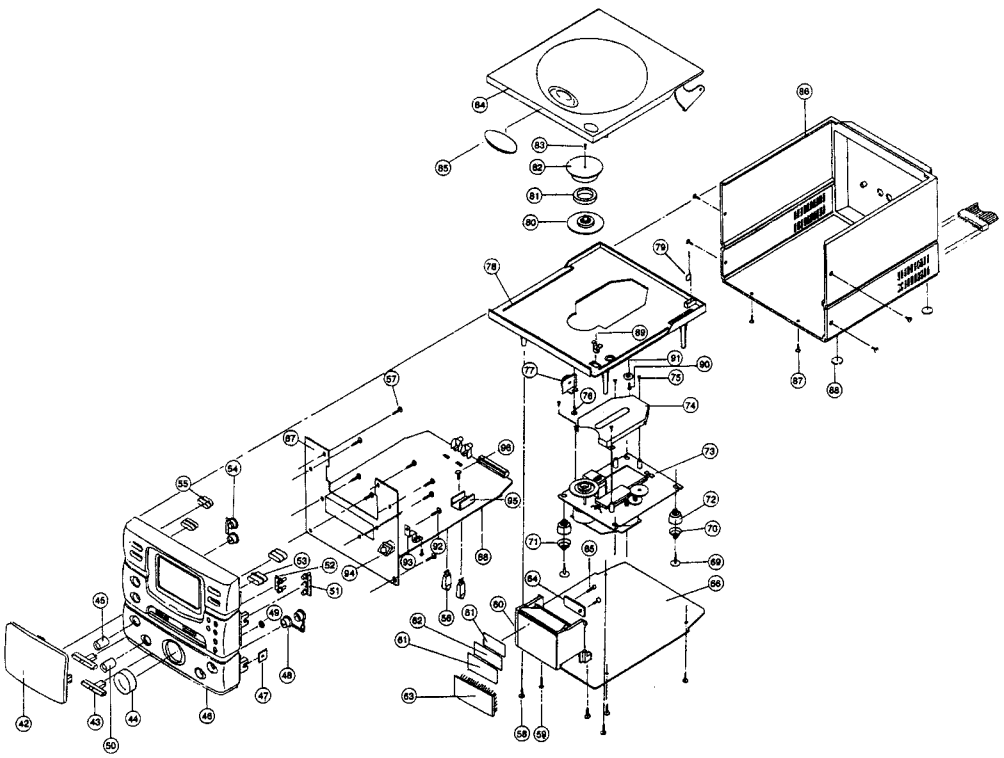
Explosionsdarstellung Gehäuse Block 1
Exploded view housing block 1



Ersatzteilliste Gehäuse Block 2
Spare parts list housing block 2

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
00 595 73	Frontblende CD/ST	Front panel CD/ST	46	B 0
00 595 74	Gehäuseoberteil CD/ST	CD holder CD/ST	78	A 7
00 581 67	Gehäuse CD/ST	Rear cabinet CD/ST	86	C 2
00 581 68	Gummi Fuss	Rubber foot	88	A 1
00 595 75	Abdeckung Laser	CD cover plate	74	A 3
00 595 76	CD Fachdeckel	CD door	84	A 8
00 581 71	Blende CD Fachdeckel	CD door lens	85	A 4
00 595 77	Magnet kpl.	Magnet ass'y	80-83	A 7
00 608 83	Rastmechanik CD Fachdeckel	Push catch	89	B 0
00 581 73	Dämpfung CD Fachdeckel	Gear damper	77	A 5
00 580 04	Feder CD Fachdeckel	Eject spring	79	A 1
00 595 78	Abdeckblende Display	LCD display lens	42	A 4
00 595 79	Abdeckblende Display Dual	LCD display lens Dual	42	A 4
00 595 80	Abdeckblende IR-Empfänger	Sensor lens	49	A 1
00 581 76	Tastenblock Preset/Repeat/Set/Mem	Button program	55	A 3
00 595 81	Tastenblock Play/Pause/Stop	Button play/stop	53	A 1
00 595 82	Tastenblock Up/down	Button tuning	48	A 1
00 581 79	Tastenblock Timer/Shuffle	Button memory "B"	52	A 3
00 581 80	Tastenblock Sleep/Intro/Display	Button memory "A"	51	A 3
00 595 83	Knopf Schiebeschalter Function/Band	Knob function	43	A 1
00 581 82	Drehknopf Bass, Treble	Knob tone	45, 50	A 3
00 581 83	Drehknopf Balance	Knob balance	44	A 3
00 581 84	Tastenblock Volume	Button volume	54	A 3
00 595 84	CD Mechanik EXL-M6	CD mechanism EXL-M6	73	F 0
00 580 29	Dämpfgummi CD Mechanik	Rubber damper	72	A 2
00 580 30	Feder Dämpfung vorn	CD support spring front	71	A 0
00 580 31	Feder Dämpfung hinten	CD support spring rear	70	A 0
00 580 32	Schraube CD Dämpfung 3x8	CD mech. mig screw	69	A 0

Explosionsdarstellung Gehäuse Block 2
Exploded view housing block 2



WICHTIGER HINWEIS/IMPORTANT NOTE

Der integrierte CD-Spieler arbeitet mit unsichtbarem Laserlicht.

Nicht in den Strahl blicken und sich nicht dem Strahl aussetzen!

Vorsicht, Laserstrahlung im Inneren des Gerätes!

Zur Vermeidung von Strahlungsschäden darf das Gehäuse nur von qualifiziertem Fachpersonal geöffnet werden.

Informationsetikett auf der Geräterückseite (siehe Bild).

The integrated CD-Player works with invisible laser-light.

Do not look into this beam and don't abandon yourself to radiation.

Attention, laser-radiation also inside of the unit!

To avoid damages of radiation unit should be opened only by qualified service personnel.

Information label on the rear of unit (see picture).

VAROITUS!

Suojakoteloa ei saa avata. Laite sisältää laserdiodin, joda lähettää näkymäntöntä silmille vaarallista lasersäteilyä.

VARO!

Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

LASER KLASSE 1

Laser $\lambda = 780$ nm
$P_{max} = 0{,}5$ mW

CLASS 1 LASER PRODUCT

Laser $\lambda = 780$ nm
$P_{max} = 0{,}5$ mW

LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

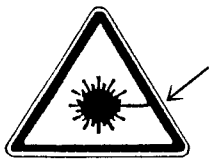
Warnetikett in dem Plattenfach (siehe Bild).

Warning label in record-drawer (see picture).

UNSICHTBARE LASERSTRAHLUNG NICHT DEM STRAHL AUSSETZEN LASER KLASSE 3 B

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

ADVARSAL:
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



Austrittsöffnung für Laserstrahlung
Discharge orifice for Laser radiation

Hinweis für Original-Etikett:
Schrift und Umrandung schwarz, Untergrund gelb.

Indication for original label:
Letters and surrounding black, background yellow.

Bitte bei Ersatzteilbestellung die genaue Bezeichnung und **Ident-Nr. (siehe Typenschild)** des Gerätes sowie Bestell-Nummer und Positions-Nummer des Ersatzteils angeben.

For ordering of spare parts please state exact description and **ident.-no. of unit (see silver rating label on the backside of unit)** as well as part no. and position no. of required spare parts.

Benutzen Sie:

Bildschirmtext *317298 #

oder

Telefax: 08245/51326

Der Umwelt zuliebe!

Diese Serviceanweisung wurde auf chlorfrei gebleichtem Papier gedruckt.

Working for the environment!

This service manual is printed on paper whitened without chlorine.

Preisänderungen / technische Änderungen vorbehalten.
Price modification / technical modifications reserved.
Herstellung: Holzmann Druck, 86825 Bad Wörishofen